Determination of Public Land (Rangeland) Health for 64058 E. CLYDE BLACKWELL

The Record of Decision (ROD) for the New Mexico Standards for Public Land Health and Guidelines for Livestock Grazing Management (dated January 2001) adopted three Standards for Public Land Health. These are (1) Upland Sites Standard, (2) Biotic Communities, Including Native, Threatened, Endangered, and Special Status Species Standard and (3) Riparian Sites Standard.

The ROD also established a process for the BLM Field Offices for the implementation. Through a public participation process, the Roswell Field Office developed and adopted indicators to use in conjunction with existing monitoring data to assess these standards.

Field assessment worksheets and other available data that evaluate the local indicators were completed for this allotment. Based on the assessments, it is my determination that the public land within E. Clyde Blackwell allotment #64058 meets the Upland Sites standard and (2) Biotic Communities, including Native, Threatened, Endangered, and Special Status Species standard. There are no public land Riparian areas on this allotment, therefore this standard was not addressed.

/s/ T. R. KREAGER	08/04/2004
Assistant Field Manager	Date

Standards of Public Land Health
Evaluation of 64058 E. CLYDE BLACKWELL Allotment
[07/08/2004]

The Roswell Field Office conducted rangeland health assessments at one study site within the E Clyde Blackwell allotment #64058. The assessments looked at the Soil/Site Stability, Hydrologic Function and Biotic Integrity indicators within the vicinity of each study site. Existing monitoring data was incorporated into and in support of the field assessment. The summary of each assessment is attached and shown in the following table.

Study Area or Assessment Area	UPLAND			BIOTIC			RIPARIAN		
	Meets	Monitor an Indicator	Does Not Meet	Meets	Monitor an Indicator	Does Not Meet	Meets	Monitor an Indicator	Does Not Meet
64058-IDSU-A160	X			X			N/A		

Twenty-two (22) indicators for Rangeland Health were evaluated for the public land on the E. Clyde Blackwell allotment #64058. Ten (10) of these assessed soil site stability, 11 hydrologic function, and 13 biotic integrity. These qualitative assessment in conjunction with quantitative information gathered from previous data collected on one location were utilized to determine the rangeland health of the public land within the allotment. This allotment is in the "C" (custodial) management category due to the small amount of public land present.

The pasture with the public land assessed was inventoried in 1991, it encompasses 200 acres/91 hectares in a SD-3 Loamy ecological site with a Hollomex-Reeves-Milner soil complex with gyp inclusions on the gently undulating uplands with slopes 0-3%. No livestock were observed at the time of assessment.

Saltcedar (Tamarix ramossisima) has been extracted here in this pasture and the slash/brush piles of dead trees have been left in place. The holes left by extraction have vegetated and are stabilizing. Soil surface resistance to erosion surprisingly showed very little erosion potential in the interspace and under the canopy samples. This suggests that the holes left by the extraction process are filling in quite readily not only with vegetation, but with litter and soil as well. As a result, organic matter content is high as evidenced by stabilizing agents with the soil stability test and litter amount estimations. The majority of these soil and hydrologic indicators assessed rated in the None to Slight to Slight to Moderate category. However, pedestals and/or terracettes, annual production,and invasive plants rate Moderate. Active pedestaling is occuring on some of the gyp dropseed (Sporobolus nealleyi) and alkali sacaton (Sporobolus airoides) in the

flow paths and interspaces. Annual production, with a Moderate rating, is approximately 1/2 of the potential for the ESD but slightly higher than the 1991 double-sampling figure of 296 lbs/ac or kg/ha. Although saltcedar has been removed from this pasture, Russian thistle (Salsola iberica) is scattered throughout and this rated Moderate for invasive plants. Four-wing saltbush (Atriplex canescens) is in abundance throughout and will provide good forage for livestock and wildlife. Most of the growth at present is not from young plants, but from rhizome and stolon/tiller formation of established vegetation. Physical and biological crusts are evident throughout and intact for most of the site.

Wildlife - Evaluation of the integrity of the biotic community considered several indicators as attribute indices for the area of interest. Biotic indicators are interrelated with several other indicators, including soil/site stability, hydrologic function, and vegetation. Several indicators are singularly biotic and address the vegetative aspect of the ecological site description, such as functional/structural groups, annual production and invasive plants, as discussed above. In addition to the standard worksheet biotic factors, four specific wildlife indicators and descriptors are included in this evaluation.

The area of interest is an isolated 160-acre parcel adjacent to the Bitter Lake National Wildlife Refuge to the east. It is a relatively small and narrow sink/playa on top of the escarpment of the Pecos Valley. Developments such as residential areas and irrigated croplands are located around the area. Two biotic indicators fell within the Moderate rating; annual production and invasive plants. Considering present climate regimes, the first indicator can be expected to fall within the normal range of variability. In the past saltcedar had increased to dominate the playa, contributing to past declining range site conditions and overall drying conditions over time. In 2002, saltcedar control was conducted on the entire area. An upward trend in rangesite ecological condition was noted by the removal of saltcedar tempered by the invasion of Russian thistle (seasonal explosion under ideal precipitation patterns). The relatively high density of tumbleweed led to the moderate rating, otherwise, browse species are found in the area and the pasture has not been grazed by the allottee (horses).

Wildlife Habitat and Population indicators rate Slight to Moderate, primarily for upland game birds and a variety of non-game terrestrial species. The composition of vegetation reflects current climatic conditions, e.g., drought for the past several years and past site invasion by saltcedar. Range site production and cover of a variety of preferred plant species for wildlife, such as forbs and woody browse species, and the availability of seed for food and regeneration, is moderated by climate and, in this area, past saltcedar invasion. It should be noted that as habitat conditions change, i.e., shift back to grasslands from the saltcedar-dominated landscape, a shift in wildlife species and populations will occur, with those species preferring a woody tree/shrub component decreasing and those requiring a more open grassland aspect increasing. The numerous brush piles provide an abundance of cover as well. With respect to Special Status Species, none are known to occur. Habitat and Population indicators are, therefore, rated None to Slight.

Hydrology - The pedestals and/or terracette indicator rated as moderate. The recent dry conditions in combination with wind and water erosion has possibly decreased the

amount of plant cover and possibly decreased infiltration into the soils which may have increased the amount of pedestaling of plants and rocks. All other indicators rated as none to slight or slight to moderate. Sand and gravel deposits of Quaternary terrace gravel deposits outcrop in the area. It is the professional opinion of the Assessment team that the public land within the E. Clyde Blackwell allotment meets the Upland and Biotic standards. There are no Riparian issues present, therefore this standard was not addressed. See site notes and recommendations for additional information regarding this assessment.

Recommendations: More recent and continued quantitative monitoring is recommended to track the effects of the saltcedar extraction. With favorable precipitation, the pasture should recover quickly and the disturbances from eradication can begin to heal. A rotational grazing scheme to reduce the decadent grass and invigorize the young growth while still giving these plants ample room for seed production, can expedite it's recovery.

RFOs Upland and Biotic Standard Assessment Summary Worksheet			
SITE 64058-IDSU-A160			
Legal Land Desc	NENW 20 0100S 0250E Meridian	Acreage	200
Ecosite	042CY007NM LOAMY SD-3	Photo Taken	Y
Watershed	13060007010 GOPHER		
Observers	NAVARRO/MCGEE	Observation Date	07/08/2004
County Soil Survey	NM644 CHAVES NORTH	Soil Var/Taxad	
Soil Map Unit	HMA	Soil Taxon Name	HOLLOMEX
Texture Class	NM644 L	Soil Phase	HOLLOMEX-REEVES-MILNER
Texture Modifier	NM644 LOAM,DRY		
Observed Avg Annual Precipitation		Observed Avg Growing Season Precipitation	
NOAA Annual Precipitation	9.17	NOAA Growing Season Precipitation	6.23
NOAA Avg Annual Precipitation	12.48	NOAA Avg Growing Season Precipitation	10.12
Disturbances and Animal Use:	Saltcedar has been removed by extraction and piles-slash/dead trees have been left there. No livestock are using the location at the moment.		

Part 2. Attributes and Indicators

		Departure from Ecological Site Description/Ecological Reference Areas				
Attribute	Indicators	Extreme	Moderate to Extreme	Moderate	Slight to Moderate	None to Slight
S H	Rills					X
Comments:						
S H	Water Flow Patterns				X	
Comments:						

S H	Pedestals and/or Terracettes			X		
Comments:	Pedestaling on alkali sacaton and gyp dropseed.					
S H	Bare Ground				X	
Comments:	Falls within the expected range at 50% estimation.					
S H	Gullies					X
Comments:						
S	Wind-scoured, Blowouts, and/or Deposition Areas					X
Comments:	Non-applicable.					
H	Litter Movement				X	
Comments:	Some displacemant.					
S H B	Soil Surface Resistance to Erosion					X
Comments:	Matches. Very little melting of canopy and interspace samples.					
S H B	Soil Surface Loss or Degradation				X	
Comments:						
H	Plant Community Composition and Distribution Relative to Infiltration and Runoff					X
Comments:						
S H B	Compaction Layer					X
Comments:						
B	Functional/Structural Groups					X
Comments:	Gyp dropseed, coldenia, four-wing saltbush, alkali sacaton, burrograss, mesa dropseed, threeawn, and Russian thistle.					
B	Plant Mortality/Decadence				X	
Comments:						

H B	Litter Amount				X	
Comments:	Now estimated at 20-30%.					
B	Annual Production			X		
Comments:	Tops of grass should be higher with more seed formation. Otherwise, we have 400-500 lbs/ac or kg/ha.					
B	Invasive Plants			X		
Comments:	Russian thistle scattered throughout. Saltcedar has been removed.					
B	Reproductive Capability of Perennial Plants				X	
Comments:	Only slightly limited.					
S	Physical/Chemical/Biological Crusts					X
Comments:	Physical and biological crusts throughout.					
B	Wildlife Habitat				X	
Comments:	A relatively small and narrow low-lying sink on top of the breaks of the Pecos Valley overlooking the Bitter Lake National Wildlife Refuge to the east. There is no surface drainage out of the sink/playa. An intensive saltcedar extraction project was conducted in 2002 to improve the grassland habitat area within the sink/playa. Wildlife cover abounds because of the dozens of brush piles created from the project. Important wildlife species of concern include upland game birds and a variety of non-game terrestrial wildlife species.					
B	Wildlife Populations				X	
Comments:	No specific wildlife information at this time although a number of small wildlife species were observed using the brush piles.					
B	Special Status Species Habitat					X
Comments:	None known to occur. During the field visit, a rare Phacelia species was observed in the area and photographed. This find was shared with Bob Sivinski, NM State Botanist, who has an interest in the species.					
B	Special Status Species Populations					X
Comments:	None known to occur.					
Part 3. Summary						

A. Indicator Summary - Each of the indicators are associated with one or more of the attributes below. An indicator is placed in a category (columns) above and summed for each of the Standard Attributes.

Standard Attribute		Extreme	Moderate to Extreme	Moderate	Slight to Moderate	None to Slight
S	Soil	0	0	1	3	6
H	Hydrologic	0	0	1	5	5
B	Biotic	0	0	2	6	5

B. Attribute Summary. In this table, the Extreme and Extreme to Moderate columns in the table above are merged for the *Does not Meet* column, Moderate becomes *May Need More Info*, and Slight to Moderate and None to Slight merge to form the *Meets* columns. Values from the table are summarized below. Space is provided for rationale of the determination. This space should most certainly be used when the determination by the ID team conflicts with the summarized values. Provide the sources of information that lead to the determination. X out the appropriate box for each attribute to denote final agreed upon determination by the ID team.

Attribute	Rationale	Does Not Meet	May Need More Info	Meets
Soil		0	1	9
Hydrologic		0	1	10
Biotic		0	2	11

Site Notes: The site was located and gps'd since this is a non-permanent study. Saltcedar has been eradicated by extraction and the area appears to be recovering. Slash/brush piles are left where they were originally placed and recommendation is to leave them there to provide habitat for smaller animals. It has been approximately two years since the extraction took place and it looks in good condition considering the drought. No livestock were observed at the time of assessment. Last data collected was for inventory purposes in 1991.


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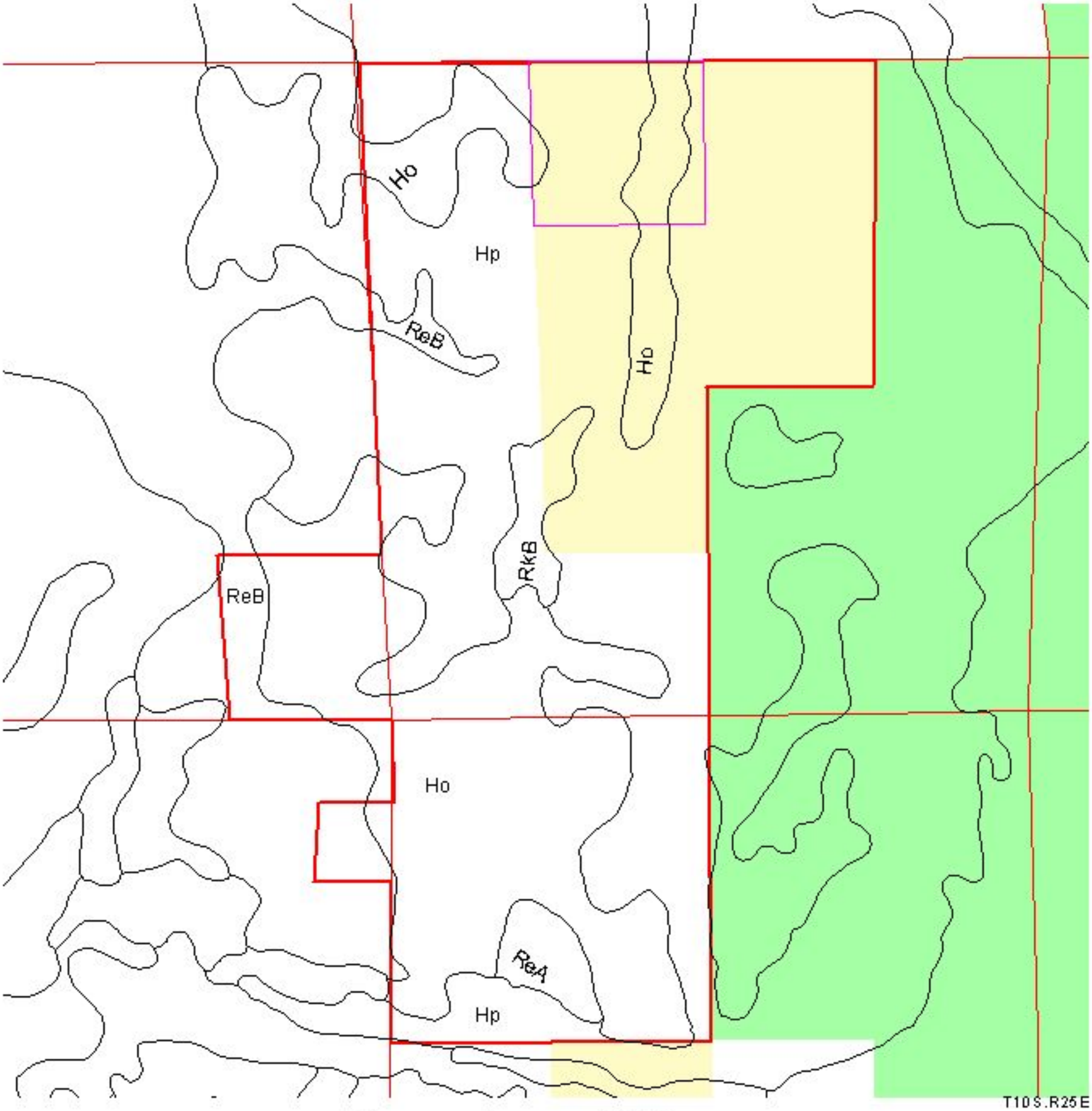
Rangeland Health Assessment
Soil Mapping Units

Allotment 64058

T10S.R25E



Public

Study Plots

FWS

State

Private

Soil Mapping Units

Allotment Boundary

Produced by the Roswell Field Office
GIS Intern on July 8, 2003.